

Growth Factors/Cytokines for White Blood Cells

Cytokine	Adults ¹	Children ¹	Pregnant Women ²	Precautions
G-CSF or filgrastim	<p>*Subcutaneous administration</p> <p>*5 ug/kg of body weight per day</p> <p>*Continued until ANC > 1.0 x 10⁹ cells/L</p>	<p>*Subcutaneous administration</p> <p>*5 ug/kg of body weight per day</p> <p>* Continued until ANC > 1.0 x 10⁹ cells/L</p>	Class C ³ (Same as adults)	<p>Consider discontinuation if pulmonary infiltrates develop at neutrophil recovery for patients with:</p> <ul style="list-style-type: none"> * Sickle-cell hemoglobinopathies * Significant coronary artery disease * Acute Respiratory Distress Syndrome
Pegylated G-CSF or pegfilgrastim	1 subcutaneous dose, 6 mg	For adolescents >45 kg: 1 subcutaneous dose, 6 mg	Class C ³ (Same as adults)	<p>Consider discontinuation if pulmonary infiltrates develop at neutrophil recovery for patients with:</p> <ul style="list-style-type: none"> * Sickle-cell hemoglobinopathies * Significant coronary artery disease * Acute Respiratory Distress Syndrome
GM-CSF or sargramostim	<p>*Subcutaneous administration</p> <p>*250 ug/m² per day</p> <p>*Continued until ANC > 1.0 x 10⁹ cells/L</p>	<p>*Subcutaneous administration</p> <p>*250 ug/m² per day</p> <p>* Continued until ANC > 1.0 x 10⁹ cells/L</p>	Class C ³ (Same as adults)	<p>Consider discontinuation if pulmonary infiltrates develop at neutrophil recovery for patients with:</p> <ul style="list-style-type: none"> * Sickle-cell hemoglobinopathies

				<p>* Significant coronary artery disease</p> <p>* Acute Respiratory Distress Syndrome</p> <p>For healthy people exposed to radiation, consider discontinuation of growth factors if signs of respiratory distress (e.g., cough, dyspnea, or peripheral edema) occur.</p>
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Notes:

1. When to initiate treatment:

- Initiate treatment with granulocyte colony-stimulating factor or granulocyte-macrophage colony-stimulating factor in victims who develop an absolute neutrophil count $< 0.500 \times 10^9$ cells/L and are not already receiving colony-stimulating factor.
- Consider initiating therapy at lower whole body exposure dose in nonadolescent children and elderly persons because their marrow reserve may be compromised.

2. For pregnant women:

- Experts in biodosimetry must be consulted.
- Any pregnant patient with exposure to radiation should be evaluated by a health physicist and maternal-fetal specialist for an assessment of risk to the fetus.
- Class C refers to U.S. Food and Drug Administration Pregnancy Category C, which indicates that studies have shown animal, teratogenic, or embryocidal effects, but there are no adequate controlled studies in women; or no studies are available in animals or pregnant women.

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